FARM INDEX

U.S. Department of Agriculture
December 1976

A Christmas Dinner To Please Even Scrooge

Outlook

The Nation's larders are well stocked as we head into the new year. Credit belongs to bumper crop supplies coupled with good showings in pork, beef, poultry, and dairy production.

Accordingly, retail prices for most foods will edge only a little higher in the winter, say ERS economists. Fresh vegetables and coffee will take the lead. But by daffodil time, they'll be joined by red meats and other commodities in the column of price markups. Meaning: The pace of food price increases may quicken in the spring months.

However, ERS's latest forecast of retail food prices calls for a rise of only around 3 percent in the first half of 1977 versus January-June 1976. That's quite a comedown from a couple of years ago when retail food prices jumped 14 or 15 percent annually.

If output is larger and demand weaker than what economists now anticipate, retail food prices would inch up just 2 percent from the first half 1976 average. A little less output with stronger demand, however, would cause prices to swell by as much as 4 percent.

In deciding whether this is the best time to buy, shoppers should be aware that the supply and price picture varies by commodity. Here is how our commodity specialists have sized up the situation:

At the meat counter, pork will stay plentiful into the spring of 1977, and prices should be fairly steady. Outlook for beef is the opposite: last summer's cutback in placements of cattle on feed spells strengthening prices. Ditto for turkey meat. Broilers and fryers, by contrast, will be more abundant in the first half of 1977 versus a year earlier, so prices should come down.

Likewise for supplies of milk and dairy products in coming months, although prices in first half 1977 may average a shade above 1976.

We'll be paying less for eggs this winter than last, and January-June 1977 prices may average a little lower than the same 1976 period.

Vegetable oil prices are seen holding firm because of the reduced 1976 soybean crop, and soybean oil is the mainstay of the food fats market.

Supplies of the major canned vegetables in the new season appear to be moderately smaller than in 1975/76. On the other hand, both stocks and the 1976 packs of frozen vegetables are materially smaller. On balance, there's not much relief in sight for vegetable prices, although larger potato supplies probably will hold potato prices under last year's levels.

Supplies and prices of fresh and processed fruits also offer the consumer a mixed bag. In general, noncitrus supplies will be lower, and prices, higher. But record supplies expected for citrus will mean substantially lower prices.

After posting small declines this year, prices for cereals and bakery products may be heading up a bit in response to higher marketing costs.

Those with a sweet tooth should be happy to hear that the world sugar crop scored another record this year. Wholesale prices have sagged and retail prices will follow suit.

But if you add sugar to your coffee, further advances in store for coffee prices will cancel out the savings in sugar. Green coffee prices are now 2 or 3 times the July 1975 level due to tight supplies, and they'll likely stay that way for the next 2 years.

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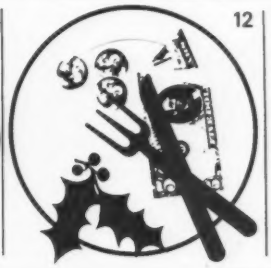

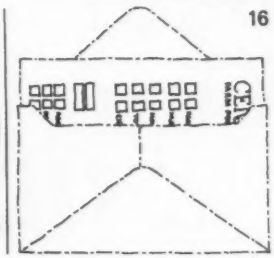

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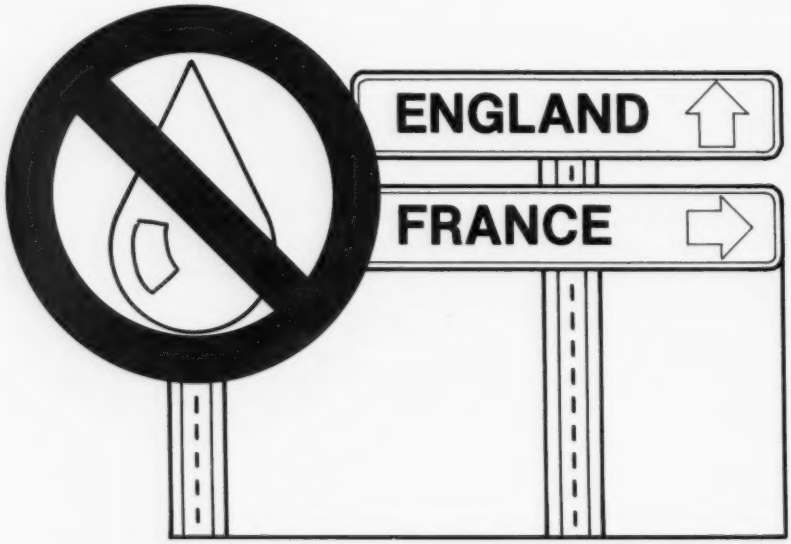
After the Drought



Emerging from the worst drought in at least a century, Europe is still counting its agricultural losses. And speculation continues on how the continent plans to make up for those losses.

To assess the impact of the drought and what role the U.S. could play in the future, let's look at the situation in Western Europe—the European Community (EC) countries in particular, the hardest hit. These countries are Belgium, Denmark, France, Ireland (who escaped the drought), Italy, Luxembourg, the Netherlands, West Germany, and the United Kingdom. The non-EC countries, of which Spain was affected most by the drought, generally fared better and, in addition, have a lesser impact on world trade.

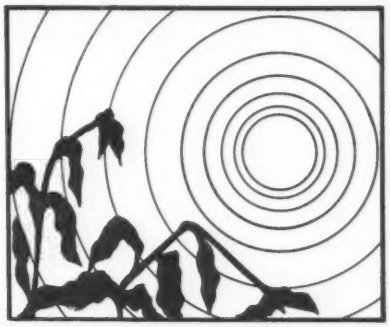
Forage crops shrivel. Perhaps the worst agricultural blow was to the forage crops. As the searing summer days marched on, pastures browned and roughage crops shriveled. Production of dehydrated forage was cut so drastically that the EC has levied a tax on alfalfa pellets and hay to discourage their export from member countries.

France, the main forage-producing EC country, has seen its forage crops dwindle so, that a 40-percent drop in production is feared. At one point, the forage situation was so crucial in northern France that the French mobilized their army to haul straw into the hardest hit areas.

Oilcakes in demand. With forage production slashed and grain production down, too, the demand for oilcakes will be up in the coming months. The EC itself lists its possible import needs for 1976/77 as follows: 9 million tons of soybeans, 2 million tons of other oilseeds, 4 million tons of soybean cake and meal, and 4 million tons of other oilcakes.

Imports of lesser feedstuffs to the EC could also increase. These include such items as citrus fruit pulp, bran and other milling byproducts, corn gluten, and manioc and other root products.

More wheat is being fed to make up for some of the deficit in the more traditional feeds and forages. Fortunately, the winter wheat crop weathered well, actually bringing in a bigger harvest than the previous year's poor crop. Yields were cut some by the dry conditions, but increased acreages offset the effect.



Barley barter. Production of two major EC feed grains—barley and corn—will be down considerably. Barley is running about 3 million tons short of the 1975 crop, and over 5 million under that of 1974. What's more, the quality of the crop is down, mainly due to the bigger-than-usual share of undersize grains. And the demand for barley as a feed grain will be up against stiff competition—the brewery demand—for a chunk of the estimated 1976 output of 29.5 million tons.

Although the score isn't in on the corn crop, it certainly won't be a winner. Three things point to a significant drop in production: (1) Reduction in acreage sown to corn (particularly in France), (2) Poor yields due to lack of moisture, and (3) Premature harvesting (ensilage) of some of the crop to make up for depleted forages, or simply to save some from further ravages of the drought.

Grain import profile. With such a grain picture, the EC—and Western Europe in general—can be expected to increase imports. However, the increase will probably not match the drop in production, for the EC will likely hold on to more of its grains, cutting down on the amount it trades on the world market.

The U.S. is a prime candidate to fill some of the increased demand for grains. Total shipments to Western Europe (including both EC and non-EC countries) could be up several million tons for 1976/77. In addition, the U.S. could pick up on some of the void left by Western Europe in world trade.

Something to beef about. As can be expected, a region with suddenly reduced forage and feed grain crops is bound to have problems in the livestock sector. And this is the case in Western Europe, although with a different twist.

The EC, one of the world's biggest beef consumers, has for the past 3 years been plagued by surplus production. And, to help mitigate the effects, the EC has had stiff import restrictions on beef.

Although the surplus situation eased a bit early this year, the drought has brought on some distress slaughtering and fears that if the forage situation does not improve, increased slaughterings could depress prices even further with only a small reduction in surpluses.

Whether the weather. This winter will have a telling effect on the livestock situation. If it is mild, the cattle can stay on the pastures, but if it isn't, the slaughter rate could pick up considerably in view of the tight feed picture. At any rate, strict import quotas are expected to remain in force.

Another commodity that has been in overabundant supply in the EC is milk. During the first half of the year, supplies were headed for an even larger surplus than the previous year, but as the drought tightened, production dropped below that of 1975. As a result, EC dairy output for 1976 should be about the same as in 1975, and would therefore remain a net surplus.

The dry summer months had an interesting effect on consumption patterns of dairy products. It seems that people were retreating to cold glasses of milk, ice cream, or other fresh milk products to help beat the heat. However, they were off butter to some degree—too hot to bake, perhaps?

Wine to still flow. The EC fruit and wine grape crops appear to have escaped the drought relatively unscathed. Vegetables, though, are another matter.

The annual pea and bean crops have suffered considerable damage. Production of other vegetables such as tomatoes, cauliflower, cabbage, onions, carrots, and some other root vegetables (except potatoes), has dropped in some areas from a fifth to a third. However, due to the rapid crop turnover and possibility of greenhouse cultivation, these vegetables could rebound somewhat.

It follows that fresh vegetable prices have been markedly higher. For example, this past August, British consumers were paying nearly 90 percent more than last for cabbage, over 50 percent more for cauliflower, and about a third more for tomatoes, lettuce, and cucumbers.

Fresh vegetable quest. The EC has suspended custom duties on some of the fresh or refrigerated vegetables, but it is too early to tell what effect this move will have. Due to distance and the perishability of many of the vegetables, though, it is unlikely that the U.S. will enter this market on a large scale—except for potatoes and onions, which it is already shipping to the continent.

The potato crop throughout Western Europe has been particularly hard hit by the drought. Total West European production for this year's

DROUGHT (drout, drouth): a prolonged period of dry weather; lack of rain.

Webster's dictionary doesn't tell us how long is long enough for a drought, but in any case, Europe certainly qualified this year. The stage was being set as early as last winter for the worst drought the continent has seen in at least a century.

Leading up to the first warnings of a drought, much of Western Europe received less than two-thirds of the normal rainfall during December 1975-March 1976. Particularly affected were: central and southeastern England, Belgium-Luxembourg; central, western, and southwestern Germany; northern France; and northern Italy.

Through the next 3 months—April-June—the weather bore down even harder, cutting the rainfall to less than half of normal in the already affected areas and in northern Germany and southern and eastern Netherlands.

In July and August, significant rainfall in the southern regions offered some respite, but little rain fell to the north. By then, the damage to agriculture was already done. France, Western Europe's major agricultural producer, was hardest hit.

crop is estimated at 885 million cwt., down 108 million from last season, which was even a low-production year itself.

On the other hand, the U.S. potato crop is enjoying record prospects of around 300 million cwt., about 40 million more than we would probably be using ourselves.

Potato trade. And the West European countries are in the buying mood, although just how many potatoes they will be shopping for or who they will be getting them from is still up in the air. However, it is fairly certain that the U.S. will be a major supplier.

With the lifting of EC disease-control restrictions formerly banning imports of U.S. fresh potatoes, most of the potatoes we'll be sending will be fresh, although some will be in dehydrated or granule form.

The increased export activity will probably strengthen already low prices here at home, but they still should be below those of last year.

Production of sugar beets, another major agricultural commodity of Western Europe, will also be down due to the drought, but is still expected to cover consumption.

Transportation and farm income. Outside of commodity-to-commodity blows, the drought has affected West European agriculture in other ways—notoriously in farm income and, in some regions, the transportation of farm inputs or commodities.

With the prolonged dryness, many rivers and canals began to run low, some becoming unnavigable or even drying up. As a result, hydroelectrical power was cut in some areas, particularly in France, forcing increased imports of petroleum. In Germany and the Netherlands, heavy dependers on water transportation, some freight was diverted from canals to trucks.

The farm income picture has been so bad in the most drought-stricken countries that government and EC programs have been established to aid the farmers.

The individual government programs include various combinations of the following aids to farmers hit by the drought: tax concessions, emergency loans with low interest rates, postponement of repayments on some existing loans, temporary measures such as reductions in freight rates for forage shipments, and, in some cases, direct financial assistance.

Eastern Europe. Western Europe, although the continent's biggest agricultural producer and trader, did not have a monopoly on the drought—Eastern Europe was hard hit, too.

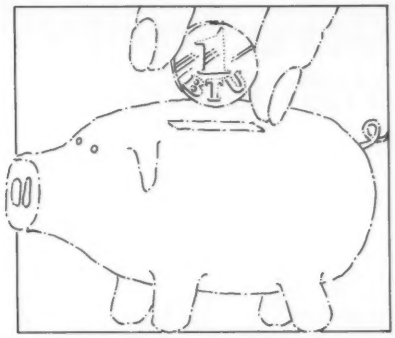
Unusually hot and dry weather in July caused sudden ripening of the grain crops and reduced yields in the northern regions. In an effort to conserve feed supplies, the burning of straw (actually an inferior feedstuff) is strictly prohibited throughout Eastern Europe.

In addition, the drought reduced harvest prospects for most all crops, including sugar beets, potatoes, forages, vegetables, and fruits. As a result, food prices have generally increased, and some consumers have feared food shortages.

U.S. exports to the region amounted to about 6 million tons of grain and 1 million tons of soymeal in fiscal 1976. For the coming year, we will probably up our grain exports to Eastern Europe by about 1 million tons.

[Based on special material from Reed E. Friend and Omero Sabatini, Foreign Demand and Competition Division.]

A BTU Saved Is ...



With high prices as a constant reminder of the energy situation in the U.S., everyone should be doing his best to conserve.

Even though American farmers use only 3-4 percent of the Nation's energy supplies, with current price levels and modest changes in technology, energy savings in agricultural production could reach 15-20 percent over the next decade. This would vary considerably among farms, depending on the types of functions performed (fertilizer and pesticide applications, field and irrigation operations, transportation, etc.), the commodities involved, and geographic location.

Potential savings. Preliminary estimates of potential energy savings in agriculture are based on cooperative research by ERS and the Federal Energy Administration. This has included the development of a 1974 data base on energy used in agricultural production, several special studies, and six energy conservation guidebooks (dairy, poultry, livestock, field crops, vegetable crops, and orchard crops) that are being reviewed for publication by USDA.

A sampling of possible energy savings for various commodities includes:

Dairy. The average dairy farm may be able to lop off 15-18 percent of its current energy consumption (other than for cropping operations) with these innovations: adjustments in milk cooling operations (accounting for almost half the savings), better maintenance of equipment, changes in water heating, and adaptations in ventilating and lighting systems.

Poultry. Poultry producers are heirs to the biggest possible energy savings—20-25 percent—mainly through improvements in their brooding operations (about two-thirds of the savings), but also through more efficient feeding and waste handling systems, and better lighting and ventilation management.

Livestock. Large potential savings in grain drying and feed grinding, preparation, and hauling (nearly one-half) may help livestock producers cut back their energy use by 15-18 percent. Changes in range and feedlot management; adjustments in lighting, watering, ventilation, and heating; improved tractor and truck maintenance and use; and better regulation of irrigation are other conservation measures.

Field crops. Depending on the crop and the area where it is grown, field crop producers may be able to save about 20 percent of the current energy used. Savings are fragmented among reduced preharvesting operations, harvesting and drying modifications, more regulated irrigation, improved fertilizer and pesticide use, and better equipment and power unit selection and maintenance.

Vegetable crops. Vegetable crop producers can probably reduce energy use 18-21 percent through more optimum fertilizer applications, reduced field operations, better regulation of irrigation, improved equipment and power unit selection and maintenance, and more efficient harvesting.

Orchard crops. As much as 20-23 percent of the energy used in producing orchard crops can probably be conserved by: modified or different frost protection methods (over two-fifths of the savings), more optimum fertilizer applications, reduced field operations, more regulated irrigation, and better equipment and power unit selection and maintenance.

Although the energy savings mentioned are substantial, it should be noted that they do not always represent net dollar savings to producers. In many instances, increases in the use of other inputs and additional investments may be involved, which negate the monetary savings of the energy cutbacks.

[Based on special material from George B. Rogers, Allen G. Schienbein, Gary G. Frank, Roy Van Arsdall, Allen J. Baker, Verel W. Benson, and N.A. Wynn, Commodity Economics Division.]

How Much Energy Can Be Saved ?

Farm Function	Possible Savings	1974 Energy Consumption Share
	Percent	Percent *
Fertilizers / Pesticides	about 10	35
Field Operations	20	20
Transportation	20	17
Irrigation	15-20	13
Livestock Production	15-20	8
Crop Drying / Preservation	20-25	7

*Estimates rounded to nearest whole number

Going Country With Crime

Jumps in the rural crime rate and rising demands for police services are pressuring rural law enforcement officers.

The FBI Uniform Crime Reports indicate that rural crime in 1975 climbed at a rate nearly equal to the national average. The national rate of increase usually has far outstripped rural rates.

Rising demands on rural police services are only partly due to the rising crime rate. Noncriminal police matters, such as noisy neighbors, domestic squabbles, runaway kids, and abandoned cars accounted for 80 percent of the calls for police in rural Michigan departments, according to a recent survey.

Rural areas still don't have nearly the crime problems of cities. The FBI Crime Index—a grouping of seven serious crimes found to represent the most frequent crime problems—shows that metropolitan areas remain more crime prone.

Metro offenses. In metro areas, 6,110 Crime Index offenses per 100,000 population were reported in 1975, compared with only 1,998 for rural areas. In other words, rural dwellers were only a third as likely to be crime victims.

Nevertheless, rural crime is getting to be a bigger problem as pointed out by other kinds of studies.

One of these studies is the annual victimization survey by the Law Enforcement Assistance Administration (LEAA).

Victimization surveys—which attempt to determine the number of crimes that have occurred, including those not reported to police—show that crime rates in rural areas are increasing at about the national rate.

From 1973 to 1974, nonviolent crimes against people (those not involving confrontations with criminals) in nonmetropolitan areas jumped 7.4 percent. Household larcenies soared 11.3 percent. Other crimes—violent crimes, burglaries (without confrontation), and auto thefts—showed no significant change.

Nonviolent crimes nationally were up 4.2 percent, and household larcenies, 15.6 percent. No significant changes occurred in the other types of crimes listed.

Unreported crimes. The LEAA studies support other data that estimate more than half of the crimes committed are never reported.

A number of reasons may account for the unreported crimes. Some victims contend that the police can't do much anyway. Others aren't aware that a crime has been committed (theft of a seldom-used tool, for example) or they aren't willing to wait for the police to act.

These problems seem especially difficult in rural areas. A very few patrol units may be expected to cover a large geographical area, thus greatly delaying response time.

Cities also have response time lags, due to the volume of calls received. This problem suggests some of the differences between rural and urban police work, and why it's difficult to compare the areas.

Crime's nature. Area covered is only one difference. The nature of crime encountered is another. Rural police are less likely to handle crimes such as muggings and bank

robberies, but more crimes such as rustling.

Also, rural law enforcers are more likely to know the crime victim, the criminal, or both. With this knowledge, some cases may be handled differently from the way they are handled in the city.

But all agree that rural and city law enforcers share one common concern. The workload is getting heavier.

The workload increases. The increased burden on rural agencies may stem from these factors:

- A general growth in rural population. More people mean more demands for police services. Between 1970 and 1973, nonmetropolitan population grew by 4.2 percent, compared with 2.9 percent in metropolitan areas.
- Improved highways make rural areas more accessible to criminals.
- Thieves have found that with increased individual wealth in rural areas, crime has become more lucrative there. CB radios, tape decks, and automobiles are frequent targets.
- Rural dwellers expect more from their police than they used to. Today, police often have to act as social arbiters, as well as crime fighters.

Police list needs. Rural police are acutely aware of these problems. At a conference on rural criminal justice at Keystone, Colorado, last year, these five needs were identified as the most critical:

1. Cooperation, coordination, and resource sharing among law enforcement jurisdictions.
2. Consolidation of training facilities to serve several small, widely dispersed agencies.
3. Adequate salaries and benefits.
4. Alternative budget sources in the face of a tightening local tax base.
5. An effective way to involve citizens in the fight against crime.

Protection at home. This last item could be of most importance to farmers. Traditionally, they haven't been prone to take steps to prevent crime, particularly thefts.

But with crime rates up, more farmers are installing alarms, locks on all buildings, and outside lights. Many farmers are generally keeping a more watchful eye on their belongings.

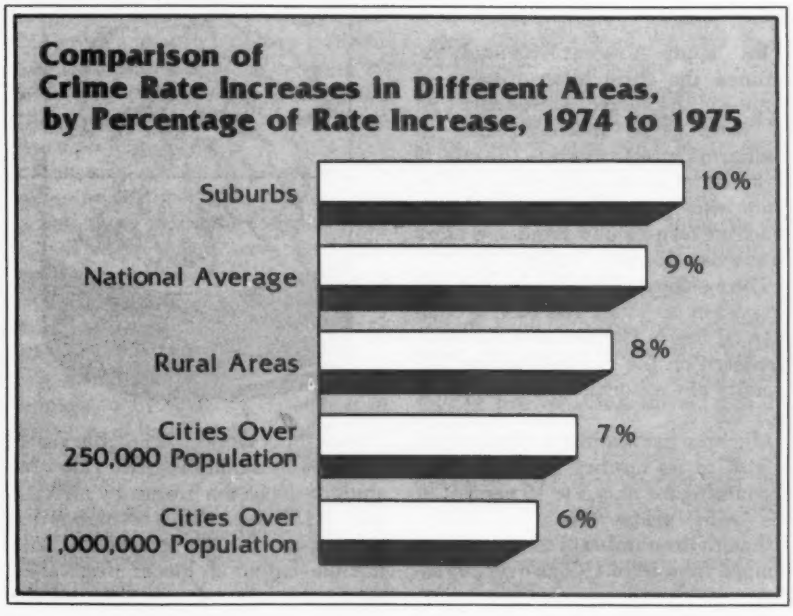
It's become more common to see farmers bringing their tractors and other machinery back to the barn at day's end, rather than leaving them in the field for the next day. When implements are left out, they're often chained. Also, some farmers are registering and branding all equipment to aid in identification.

Helping farmers cope. The rural police agencies are helping farmers cope with the problem of rising crime through educational programs. But there's still work to be done.

Increasing the size of the local police department may be too expensive.

A solution is to "buy" police services from another government entity. For example, a small town may pay the county law enforcers—in addition to regular taxes—to augment the local police, either full or part time.

[Based on special material from William A. Sinclair, Economic Development Division.]



Harvesting the Grape: A New Method

John Jones is a typical California wine grape grower—anticipating a big demand for wine, he increases his plantings. But when the expected demand fizzles, Jones is stuck with an oversupply of grapes and low prices for his crop.

Jones and other grape growers have few options available to them while waiting for demand and supply to balance. Rapid adjustments of supply are difficult for perennial crops such as grapes, which take 3 years to come into full production.

The alternatives are:

1. Market the product as raisins if it's a multipurpose grape variety, such as Thompson Seedless.
2. Remove the vines and plant something else.
3. Mechanize the grape harvest to reduce costs.

ERS study. A recent ERS study examined the third alternative to illuminate the current status and cost of wine grape mechanization in California and to analyze the effects of substituting machinery for labor. Data was provided by a group of machine owners and hand operators in the San Joaquin Valley.

The mechanical grape harvester examined in the study has been in commercial use in California since 1969. Research on the machine at the University of California at Davis began in 1952.

Machine harvesting of wine grapes is still in its infancy in the State—accounting for only 5 to 10 percent of the wine grape crush in 1974—although the number of machines has jumped from 59 in 1970 to over 200 today.

How it works. The harvester operates by straddling the vine row, shaking loose the grapes by striking the wire or vines with a set of rods in a beating action. The grapes fall to a flexible catching mechanism; then they are conveyed to the top of the machine and into a tractor-pulled gondola alongside the harvester. There are two gondolas, and while one is being filled, the other is being dumped into a truck at fieldside.

An average crew size is four persons—an operator, two tractor drivers, and a utility man. The operator holds the key position of controlling the harvest to obtain maximum quantity and quality of fruit. In 1972, when the field data were collected, average wage rates were $3 an hour for the operator and $2.25 an hour for other crew members. This compared with hourly earnings of $1.90 to $2 for hand pickers.

Acreage picked. The average area picked by machine in 1972 was 237 acres, principally in a single shift of slightly more than 10 operating hours a day, at an average harvest rate of .7 acres an hour.

Owners of grape harvesters claimed that the principal advantage of the machine was that it gave them independence from labor problems, allowing them more control over their operations.

Drawbacks included possible vine and stake damage and juicing of the grapes, in addition to the long hours of work, machine maintenance, repair costs, and the high initial outlay for the machine and supporting equipment. Overall, though, the reaction of the owners was favorable.

Production costs. What about costs? Using 1975 prices, production costs were calculated for Thompson Seedless grapes on farms in the San Joaquin Valley ranging in size from 40 to 240 acres and with an average yield of 8 tons per acre.

At a farm price of $75 per ton, the net returns to management and operator's labor showed financial losses at the 8-ton yield regardless of farm size or harvesting system. At 10 tons per acre, the larger farms showed profits for both hand and machine harvest.

If wages of farmworkers were to rise by 25 percent relative to other costs, the high proportion of labor in hand systems would increase the competitive advantage of machine harvest.

Total costs. A comparison of total costs of hand versus machine systems at different farm sizes indicated points of machine breakeven acreage (the farm size at which machine-harvest costs equal hand-harvest costs). The higher level of fixed costs made machine-harvest systems more costly per acre than hand systems on smaller farms. The breakeven point at the 8-ton yield was reached at a farm size of 220 acres; for 7- and10-ton yields, 140 to more than 240 acres.

Labor requirements of machine harvest are 19 percent of those for hand harvest, and the present 5- to 10-percent grape harvest mechanization in the San Joaquin Valley is estimated to have reduced jobs by 4 to 8 percent.

The future of harvest mechanization will depend on solving current problems of wine quality, vine damage, and low grape prices, as well as on the availability and cost of labor.

[Based on "An Economic Appraisal of Wine Grape Harvest Mechanization," by Stanley S. Johnson, Commodity Economics Division, Davis, California.]

How the Romans Did It

The ancient Romans developed such an effective method of growing grapes that it has remained virtually unchanged in 20 centuries. In fact, today's vineyards look strikingly similar to their Italian forerunners.

How do we know what Roman viticulture was like in the age of Julius Caesar? According to a recent issue of *Wines & Vines*, early Italian writers documented the Empire's remarkably advanced method of cultivating the grape. But no one knew what an ancient vineyard actually looked like until 1972, when archaeologists discovered one that had been buried beneath the volcanic rubble of Mt. Vesuvius at Pompeii nearly 1,900 years ago.

Vines of the Pompeii vineyard were planted almost exactly 4 feet apart, indicating that they were probably hand cultivated, and each vine had three or four depressions around the base to hold water. Modern Italian vineyards still use such spacing and water depressions.

Vines were trained on stakes about 1½ inches in diameter, driven in about 6 inches; those along the footpath were trained to grow higher to get more sun. From the pattern of the stakes and vines, experts believe that the vines were trellised on overhead frames known as *vitis compluviata*.

Today, new vines are often propagated by "layering"—same as in the time of the Roman Empire. The Pompeii vineyard contained evidence of this practice.

The ancient vineyard boasted 4,000 vines and was 2½ acres, divided into four sections. Footpaths used by workers to carry grapes to the winery mark the divisions, and postholes at one end of the area suggest that there was an arbored passageway. Posts and stakes were most likely chestnut, just as they are today in Southern Italy.

Pompeii's vineyard appears to have been highly productive for its time. The archaeologists estimated an annual yield of over 10,000 liters, based on storage and fermentation containers found in the remains of the wine house (there were 10 fermentation *dolia* with a capacity of 1,100 liters each).

Using Italy's temperature and soil conditions and an estimated 4,000 vines producing 16 clusters each, a USDA viticulturist calculated that the grape yield would have been 16 metric tons. At a rate of 600 liters of wine per metric ton, the vineyard would have had an annual yield of 9,600 liters.

Both figures exceed the minumum yield standards contained in the antiquated writings of Columella.

The residents of Pompeii seemed to enjoy their wine in some of the same ways as today's enthusiasts. Excavations uncovered outdoor eating areas *(triclinia)* and a wine shop where customers could sip their favorite beverage by the glass.

The *triclinia* were appoximately 12 x 12-feet, filled with couches and serving tables, probably shaded by large trees or awnings. The remains of animal bones suggest that meat was served with the wine.

The wine shop faced the street and contained a 4½-foot-long counter with step shelves to hold glasses and cups.

[Based on an article in the September 1976 issue of *Wines & Vines* magazine.]

A Christmas Dinner To Please Even Scrooge

Christmas...a time of religious significance and merrymaking...fir trees and holly...caroling and sleigh riding...a delicious hodgepodge of smells—bayberry, cinnamon, nutmeg, cloves—and, of course ... Christmas Day feasting.

Christmas dinner has become as much a tradition as the stockings and gift giving.

Perhaps the most well-known Christmas dinner of modern times is that of the Bob Cratchit family in Charles Dickens' immortal "A Christmas Carol." Although written over a hundred years ago, the simple joys expressed by the Cratchits over their holiday feast would be just as meaningful today...

The Cratchit's Christmas dinner. "Bob took Tiny Tim beside him in a tiny corner at the table; the two young Cratchits set chairs for everybody, not forgetting themselves, and mounting guard upon their posts, crammed spoons into their mouths, lest they should shriek for goose before their turn came to be helped. At last the dishes were set on, and grace was said. It was succeeded by a breathless pause, as Mrs. Cratchit, looking slowly all along the carving knife, prepared to plunge it in the breast; but when she did, and when the long expected gush of stuffing issued forth, one murmur of delight arose all round the board, and even Tiny Tim, excited by the two young Cratchits, beat on the table with the handle of his knife and feebly cried, Hurrah!"

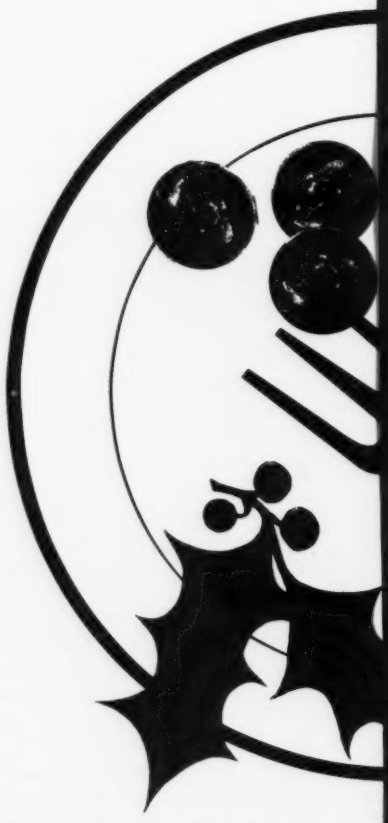
Similar to American menu. Except for the goose, which is now more expensive than its gobbling cousin, the turkey, the menu enjoyed by the Cratchits in 19th century England is very similar to the traditional American fare served today.

Besides goose, the Cratchits had sage and onion dressing, mashed potatoes and gravy, applesauce, plum pudding "blazing in half of half-a-quartern of ignited brandy," apples and oranges, and roasted chestnuts.

Today, it would cost around $27 to prepare this meal from scratch (for a family of eight, as the Cratchits were; and using goose, instead of turkey), or $28 if processed foods were used. While it's cheaper to make gravy and dressing from scratch, just the opposite is true for applesauce and potatoes. Plum pudding costs the same either way.

The "good old days"? Of course, back in Bob Cratchit's day, there were no processed foods, and Mrs. Cratchit's American counterpart would have had to prepare the whole meal from scratch—and not under the best of conditions, either. There were no modern stoves with temperature controls, no meat thermometers, no refrigerators to facilitate ahead-of-time preparation. In 1880, the Cratchits' Christmas dinner would have cost an American family of eight approximately $10.

When Grandmother was doing the Christmas cooking—in 1935—processed foods, except for canned and dry goods, were still unheard of. And although her working conditions in the kitchen would have improved greatly, she would still have probably made everything on the Cratchits' menu from scratch, since canned applesauce would have been more expensive than homemade. The cost of the meal: about $10.



In Mother's day. In 1955, Mother would have prepared Christmas dinner pretty much the same way as Grandmother had done, only by now she might have used canned applesauce, since it was cheaper than making it from scratch, and done her cooking on a gas or electric stove. The cost for serving the Cratchits' menu to a family of eight would have been roughly $19.

If Bob Cratchit were living in the U.S. today, and had a similar clerk's

position with USDA, he would be earning nearly $9,000 a year. At this salary, he would only have to work about three-fourths of a day to pay for Christmas dinner. This compares with roughly 1½ days in 1955 at a salary of almost $3,500; about 2 days in 1935 at slightly less than $1,500; and nearly 4 days in 1880 at $840.

[Based on special material from Corinne Le Bovit and Vivian Wiser, National Economic Analysis Division.]

A Look at a Christmas Past

We all know what Christmas is like today, but what about Christmases past, when parents didn't stay up all night Christmas Eve assembling complicated toys? When no televisions were around to take over when conversations dulled?

With Bob Cratchit's Christmas dinner in mind, an ERS historian suggests that Christmas Day, 1880, in small town America might have looked something like this...

Jane Rockwell was up before dawn. She dressed hurriedly and rushed downstairs to the kitchen. "It will be a simple breakfast this morning," she thought, wanting to make sure that everyone would have room for the bountiful dinner she was going to prepare.

After shaking down the ashes and adding coal to the kitchen stove, she threw a shawl around her shoulders and brought in the clothes boiler from the back porch. They wouldn't have a white Christmas—it had been too cold to snow—but it looked like the day would be clear and bright. Octavius, the family cat, came out from his bed underneath the porch and easily beat Jane back inside the warm kitchen.

While the goose was steaming in the clothes boiler, Jane broke up stale bread and made the stuffing, seasoning it with onion and sage. After stuffing the goose, she called her family down to a breakfast of steaming oatmeal and hermit cookies.

Not being able to contain themselves any longer, the four Rockwell children made a mad dash to the living room, quickly emptied their stockings, and squealed excitedly as their gifts were distributed. Besides practical items, the little girls got new dolls; the boys received bats and balls. Jane and her husband, Frank, also had gifts.

While the children straightened the house and made the beds, Jane popped the bird in the oven, remembering to put the boiler back outside so the grease would harden for future use (goose grease was valued for medicinal purposes, as well as cooking). She peeled potatoes and apples and started them boiling and mixed up the thickening for gravy.

After setting the table for eight—Jane's parents had already arrived and would be joining them for dinner— she made the applesauce and gravy, mashed the potatoes, and put the pudding on to steam. At last, everything was ready.

Everyone said that it was the best meal they had ever eaten, and that they couldn't possibly eat another bite. But when they saw Jane's blazing plum pudding, that she had so carefully prepared the day before, they all changed their minds and had big helpings.

When the table had been cleared, Jane filled several bowls with apples and oranges—a special treat that time of year—and threw a shovel of chestnuts on the fire.

While the children played with their new toys, the adults sat around the fire, sipping mulled cider and drowsily watching the day wear on.

[Based on special material from Vivian Wiser.]

Commodity Profile

The Sorghum Story

Promising new research and increasing feed grain demand may spur sorghum production in coming years, if USDA and private researchers succeed in their efforts to increase yields.

The outlook for such efforts is bright. A researcher with USDA's Agricultural Research Service says higher yields have been attained in experiments using germ plasm—the basic genetic material found in plant seed strains. Estimates of these yield increases have not yet been released.

Demand may increase. Such yield increases could be timely, considering the healthy demand for this commodity. ERS baseline projections, which are not contingent on research breakthroughs, indicate a needed 58-percent increase in grain utilization for feed, approaching a billion bushels of sorghum grain by 1985, over the 1972-74 average, to sustain projected increases in livestock output.

The increasing demand for feed grains of all kinds, and the resulting boost in farm prices, encouraged farmers to plant more acreage in sorghum. About 14 million acres annually were harvested in the U.S. during 1965-75, with a jump to 15 million acres in 1973-75.

In 1965, the value of all U.S. sorghum production was about $660 million. Last year, it was $1.8 billion, nearly a threefold increase.

Prices up. Much of the increased value can be linked to generally higher prices for sorghum, but some of it is directly related to stepped-up production. And these increases came despite disappointing yields in 1974 and 1975, attributable to bad weather.

The increased value of sorghum to the farmer was caused, in part, by the expansion of the feedlots and the resulting need for more feed grains. Development of sorghum hybrids in the early 1950's was another production stimulant.

Using these hybrids, farmers were able to almost triple the sorghum yield over historical trends to about 50 bushels an acre.

As the yields and value of sorghum increased, so did its contribution to farm income. Although it is difficult to assess just how much sorghum does contribute to farm income, the value of sorghum production averaged about 1.7 percent of total cash receipts of farmers, and about 11 percent of the value of production of all feed grains during 1965-74.

Some big producers. The crop, however, is far from being widespread. About 80 percent of the sorghum production is from three States: Texas, Kansas, and Nebraska. Other States with significant sorghum production are Missouri, Oklahoma, California, New Mexico, Arizona, and Colorado.

The climate tends to be somewhat dry and hot in most of the sorghum-producing areas. Crops such as corn and soybeans do not do well under unirrigated conditions in these areas, but sorghum does. Hence, as the nearby feedlots increased demand for feed grains, sorghum became more important as a cash crop.

Although sorghum will also grow very well in moist areas with long growing seasons, corn is the preferred crop largely because of its higher yield and greater profitability.

Sorghum's strong points are its lower cost in the areas where it's grown, and its value as a feed grain. It has as much or more protein as corn.

ERS economists predict that double cropping of sorghum and winter wheat will increase considerably. Currently, the practice contributes little to total sorghum production. By double cropping, though, farmers can get more out of their land.

Versatile crop. Nearly all sorghum is used as feed grain—less than 1 percent of it is used for food or for industrial uses. Domestic food uses are confined mostly to sorghum sirup,

COMMODITY PROFILE: SORGHUM

Production	**18 million acres planted in 1975, with total U.S. yield about 758 million bushels, up 20.5 percent from 1974**
Average production costs	**$77.45 (excluding land and management charges) per acre in 1975**
Average prices received	**$2.36 per bushel in 1975**
Average yield	**49 bushels per harvested acre in 1975**
Farm value	**Nearly $1.8 billion in 1975**
Leading States	**Texas, Kansas, Nebraska**
Foreign trade	**U.S. is the world's leading sorghum exporter, selling about 225 million bushels annually in recent years.**
Trends	**Sorghum production is rising, and may continue to rise, if feed grain demand continues to increase.**

which is extracted from the stalk of some varieties.

Industrial uses, while minor, are extremely varied: brewer's grits, aluminum ore refining, building construction products, pet food grits, papermaking, mineral processing, and charcoal briquets.

About a quarter to a third of U.S. output of the crop is exported—about 220 million bushels annually for the past 4 years. Major foreign buyers are Japan, Israel, Mexico, the Netherlands, and Venezuela.

With such healthy foreign markets, and the growing domestic demand for fed beef, the pressure could stay on farmers and researchers to produce more sorghum in coming years. Of course, sorghum's future will also rest upon its competitive relationship with other crops.

[Based on a background report prepared for the Senate Agriculture Committee by Floyd F. Niernberger, Commodity Economics Division, and on special material from P.H. Harvey, Agricultural Research Service.]

The Familiar Stranger

In much of the U.S., sorghum may be as rare as hen's teeth, yet America exports more of this grain than any other nation.

It's among the most important world grains, yet many Americans—especially city folks—wouldn't know sorghum if they were standing in a field of it.

In much of the world, sorghum is used not only as livestock feed, but in making bread, porridge, beer, and other foods.

Americans, however, use nearly all their sorghum as livestock feed—relatively tiny amounts are used to feed people.

Sorghum traditionally plays second fiddle to corn, but has most of the same food properties. Feedlot managers are major sorghum buyers.

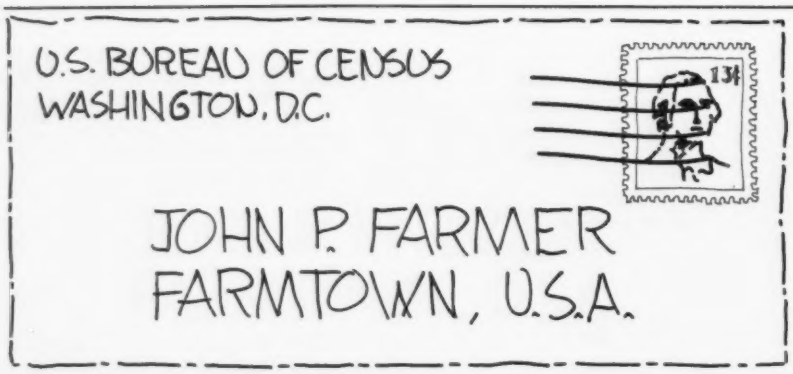
Sorghum is a tall plant, but typically shorter than its big-eared rival. Sorghum grain comes from a bundle of seeds at the head of the stalk.

The stalks themselves are often plowed back into the ground after harvesting, but they can be used for fodder or forage.

Except for the sirup extracted from the stalks of some sorghum varieties, U.S. food use is almost nil. Popular hybrid sorghum, compared with the grains grown before hybrids were developed commercially about 25 years ago, has a darker, bitterer seed. The bitterness and the color come from a high tannin content in the shell.

[Based on special material from James Driscoll, Commodity Economics Division.]

Here Comes the Census



Courtesy of the U.S. postal service, census takers don't have to knock on doors anymore. Still, the task of the people wrapped up in the 5-year census of U.S. agriculture is as time-consuming and difficult as ever, as the anatomy of our agriculture grows ever more complex.

At this moment, hundreds of employees of the Bureau of Census are sorting and compiling reams of statistics contained in the nearly 3 million mail questionnaires that came in from the 1974 Census of Agriculture.

This is the second time the pulse of agriculture has been taken via mail surveys. Until 1969 the census relied on enumerators who made personal calls on farmers and other agricultural interests to get the data.

Doubting Thomases. Some people thought the new way would not prove as accurate as when the census takers came calling, nor would it yield as high a return.

The doubters were wrong on both counts: Doing away with the enumerators tended to reduce the chance of human errors creeping in, not to mention the biases. And the mail approach saved taxpayers well over $1 million.

As for rate of replies, the Census Bureau had to send out followup reminders in some cases, but all in all the response has been better than expected using the mail technique—at least 95 percent—and 70 percent is the minimum needed for a reliable sample.

Worth the effort. Whether by mail or interview, completing survey forms is a chore for the guy on the receiving end. Yet Government officials are convinced that the agricultural census pays big dividends, although they may be intangible to measure. For example, the data help analysts chart trends for use by policymakers, farmers, agribusiness, and others as they map plans for the future.

By next spring, when the national summaries come off the press, census followers should have a pretty good fix on the situation. Some reports for States and counties have already been released (see summaries for the Mountain and Northeastern regions).

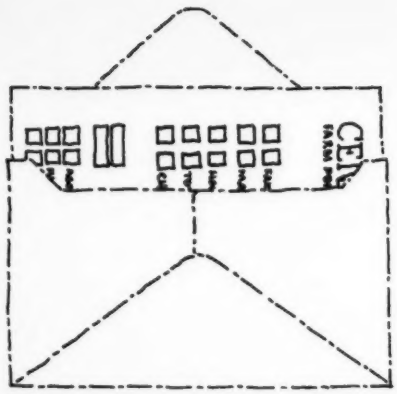
Economists at ERS are eagerly awaiting the big picture. As one analyst says: "The 1974 Census of Agriculture will give us a snapshot of what farming looks like in a new and changing economic environment.

Peace-time bulge. "Many changes have occurred in response to the greatest ever peace-time bulge in farm income, as prices rose because of foreign and domestic demand. The energy crisis left behind higher costs for energy and petroleum-based inputs like nitrogen fertilizer and pesticides. Other farm input prices rose also, and land prices reached new peaks."

Specifically, ERS economists are eager to get a reading on what's happened to the number and size of farms. Has the long-term decline in farm numbers slackened as farm income improved and nonfarm jobs diminished? If so, then the size of farms may not have changed much since 1969, when it averaged 390 acres.

Part-time quandary. Although previous censuses showed that part-time farmers have assumed more important roles on the agricultural stage, it could be that fewer jobs in the nonfarm sector have lowered the curtain on this trend. Too, some part-time farmers may have been laid off from their nonfarm jobs and decided to become full-time farmers by the time of the 1974 agricultural census. Or, some farmers with nonfarm jobs may have opted to keep on farming for security reasons.

It may be that the new census will reveal a quickened pace in the rate of incorporation of family farms in view of the skyrocketing land values. Incorporation is a financial boon when it comes to passing on assets to the



younger generation and keeping the operating unit intact.

More partnerships. An alternative to farm corporations is the partnership. ERS economists expect to see more farm partnerships because of the increasing number of young people who are choosing farming as a career (see July *Farm Index*). A partnership with an established operator—usually a parent—is a convenient way to get into farming and accumulate large sums of capital.

There could also be some increase in farmland that's rented, reason being that more landowners have taken notice of the soaring price tags for farm real estate, and they are aware that younger operators can't afford them. So, for those not choosing to sell, why not rent to an upstart or to an established neighbor who wants to add acres to his unit without outright purchase?

Role of agribusiness. In all probability, there's been an upsurge in contracting deals since 1969, a reflection of continuing trends and the change to a free market system as far as most Government programs are concerned. What ERS economists don't know is the extent to which farm supply, processing, and marketing firms are becoming more directly involved in agriculture.

The answers will be derived from special surveys connected with the 1974 Census of Agriculture—details about partnerships, corporations, vertical integration, and contracts used in the production and marketing of farm commodities.

Remember the first census? You'd have to be around 70 years old to have

Continued on page 18

Northeast: Losing Ground

If the Northeast's farm count keeps dropping at the current rate, agriculture will practically fade away in the next 50 years. That's an unlikely prospect, considering the millions of consumers in this 11-State region who depend on nearby farmers for such specialty products as dairy foods, poultry, and fruits and vegetables.

Even so, the 1974 Census of Agriculture reports a 10-percent decline in Northeast farm numbers from 1969. Land in farms shrank 8 percent, and the average farm size grew by a minuscule 3 acres to 172. This leaves the region with about 6 percent of the Nation's farms, and 3 percent of the land in farms.

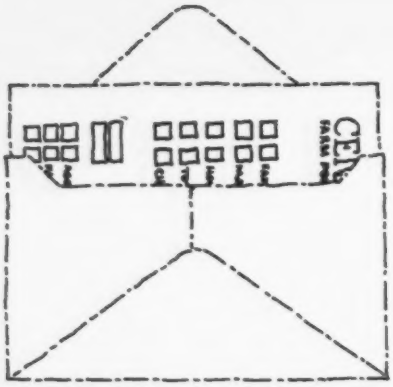
Midsize farms with annual sales of $10,000-$39,000 lost the most ground during 1969-74, although these were probably too small to support full-time farming and too large for most part-time farming. In general, Northeast farms are small by national standards: One-third had sales of under $2,500 in 1974; two-thirds sold less than $20,000 worth.

Operators selling at least $40,000 increased in number. Farms with sales of $100,000 or over advanced from 4,811 in 1969 to 10,194 in 1974, but accounted for only 6 percent of all farms in the Northeast in 1974.

Corporations with farming operations rose from 1,989 in 1969 to 3,104 in 1974. Partnerships fell by nearly a third, probably because many former partnerships decided to go the corporate route.

The gradual demise of agriculture in the Northeast may have been a foregone conclusion when the Mayflower landed. Although the settlers quickly took to the land to establish the Northeast as one of the earliest farming regions, the immigrants also saw opportunities in industry—a more attractive alternative than having to make a living during the short growing season from stony, shallow soils.

Also, competition from new regions of the country grew more intense, as they offered richer resources for agriculture. As a result, farming in the Northeast moved to areas with the more fertile soils, and farmers specialized in commodities deriving advantages from close proximity to large population centers.



participated in the first 5-year census of agriculture conducted in 1925. No one even remembers the very first agricultural census, taken in 1840. It dealt mainly with an inventory of the chief classes of livestock, the production of wool, the value of poultry, the value of dairy products, and the production of the main crops.

In 1840, the U.S. had 6 million milk cows (12 million by the 1969 census); 24 million pigs (55 million in 1969) and 19 million sheep (22 million in 1969).

The first wheat census was taken in 1839. Production was a mere 85 million bushels, compared with 1,328 million in 1969.

The first census of farm numbers was in 1850, when we had 1.5 million against 2.7 million in 1969. The peak year for farm numbers was 1935, when we recorded 6.8 million.

First sales breakdown. Not til 1945 was there a detailed breakdown of farms by sales classes, and not until the 1964 agricultural census were computers used extensively.

The 1969 census goes down as the first to collect numbers on the operations of veterinarians, crop sprayers, fruit packers, cotton ginners, corn shellers, hatchery operators, and horticultural consultants.

Thanks to the computer, all the information nowadays is put on tapes, readily accessible to the electronic processing systems of universities and others making special studies of American agriculture.

[This article and companion pieces were based on special material from George W. Coffman, National Economic Analysis Division.]

Mountain States: Holding Their Own

"Steady as she goes" is the byword of agriculture in the eight Mountain States. Both farm numbers and land in farms dipped only 1 percent between the agricultural census of 1969 and 1974. The region now claims 4 percent of the Nation's farms (they're big, however, averaging 2,140 acres) and 24 percent of the land in farms.

Average sales per farm rose considerably—from $32,000 in 1969 to $56,000 by the latest census. Assets per farm also made rapid gains, shooting up 90 percent over the 5-year period to $307,000 per farm.

Since the farm count changed only slightly, growth in farm sales during 1969-74 had to result from existing farms moving into higher sales brackets. Farms with sales of $100,000 or more expanded 1.3 times, and accounted for 10 percent of all farms in the Mountain States by 1974.

The biggest cut in farm sales came on farms selling $5,000 to $20,000 worth. However, those selling $2,500 or less continued to make up a fourth of all farms in 1974.

With sales trending up along with value of land, buildings, machinery, and other assets, more family farms became corporations. Corporation numbers gained by 50 percent between 1969 and 1974, accounting for 7 percent of all farms in the latter year.

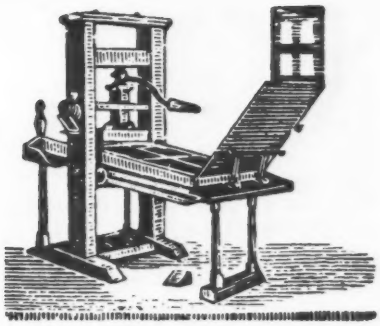
The stability of agriculture in the Mountain States may be founded in geography and climate, plus relatively little urbanization of farmland.

Patterns of agriculture were set long ago, with cattle ranching the leading activity. Rainfall is sparse, but it supports many kinds of grasses, once grazed by buffalo and other wild animals and since taken over by cattle and sheep.

Around a third of the total land area of the Mountain States—and they account for a fourth of all the land in the U.S.—is pasture and rangeland, including that not in farms but grazed by livestock under permits.

Not depending wholly on livestock, Mountain State farmers also grow wheat where rainfall is adequate. Heavy snows in the mountains provide irrigation for a variety of other crops, such as sugar beets, potatoes, and hay. Over half of the farms in the Mountain States had irrigated land by the 1974 census, averaging 185 acres per farm.

Recent Publications



Single copies of the publications listed here are available free from The Farm Index, Economic Research Service, Rm. 1664–So., U.S. Department of Agriculture, Washington, D.C. 20250. However, publications indicated by (*) may be obtained only by writing to the experiment station or university. For addresses, see July and December issues of The Farm Index.

The Agricultural Situation in the Far East and Oceania: Review of 1975 and Outlook for 1976. Foreign Demand and Competition Division. FAER-121.

Agricultural production in the Far East and Oceania made solid gains in 1975 in Afghanistan, Australia, Bangladesh, Burma, India, Indonesia, Japan, Korea, Nepal, New Zealand, the Philippines, and Thailand. Only in Malaysia, Pakistan, Sri Lanka, and Taiwan did per capita food output decline. U.S. farm exports to the region were down slightly in 1975, but should increase somewhat in 1976.

Costs of Producing Milk in the United States — 1974. Economic Research Service. Congressional Committee Print.

In response to the Agriculture and Consumer Protection Act of 1973, ERS surveyed dairy farmers in 24 major milk-producing areas to obtain information for estimating the average cost of producing milk in 1974. Several estimates of average costs per cow milked and per hundredweight of milk were computed, based on different methods of valuing feed and land. Costs varied widely by subregions.

Leaf Protein Concentrate (Pro-Xan) from Alfalfa: An Economic Evaluation. Carl J. Vosloh, Jr., Richard H. Edwards, Robert V. Enochian, Donald D. Kuzmicky, and George O. Kohler, National Economic Analysis Division. AER-346.

New opportunities await the investors that put their money in the extraction of leaf protein concentrate (Pro-Xan) from alfalfa. Pro-Xan is a process used to take xanthophyll from alfalfa. The substance is then used as a high-protein ingredient in livestock feed. Four methods for extraction are studied in this report.

Balance Sheet of the Farming Sector, 1976. Carson D. Evans, Philip T. Allen, Richard W. Simunek, Larry Walker, and James B. Hottel, National Economic Analysis Division. AIB-403.

This 32nd issue in the series (formerly called *The Balance Sheet of Agriculture*) assembles into one financial statement the major farm asset inventory and liability accounts. According to this issue, the value of farm assets in the U.S. is continuing to climb, up 12 percent on January 1, 1976, over January 1, 1975.

Energy Use and Conservation in the Poultry and Egg Industry. George B. Rogers, Verel W. Benson, and Donald L. Van Dyne, Commodity Economics Division. AER-354.

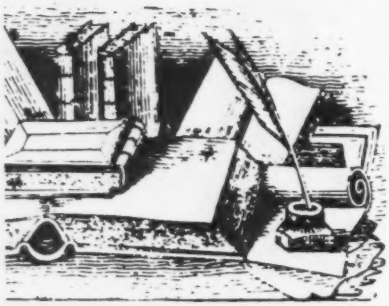
Energy conservation measures in the poultry and egg industry, as discussed in this report, can save substantial amounts of money. In 1974, poultry production and marketing cost producers almost $550 million. The last decade has seen improvements in energy efficiency in this industry, but development and implementation of new technologies could reduce energy use still further.

Farm Population of the United States: 1975. Vera J. Banks, Economic Development Division, and Diana DeAre and Robert C. Speaker, Population Division, U.S. Bureau of the Census. Farm Population Series Census-ERS, p-27, No. 47.

The U.S. farm population is continuing to decline, down another 400,000 persons since 1974 — about 8.9 million people. Since 1970, this rate of decline has averaged 1.8 percent annually, much lower than the 4.8 percent of the previous decade. Further breakdowns are given regarding the population of farms according to race, sex, age, and income.

Changes in Farm Production and Efficiency. Donald D. Durost and Evelyn T. Black, National Economic Analysis Division. Statis. Bul. 561.

Crop acreage harvested in the U. S. in 1975 displayed a marked rebound from the poor weather-induced low output of 1974. Acreage harvested hit its highest point since 1965, yet fullest potential was not realized because of the decreased use of fertilizer. The result: farm output in 1975 was 3 percent higher than in 1974, but 1 percent lower than the 1973 record harvest.



Canadian Dairy Policy. Carol E. Bray, Foreign Demand and Competition Division. FAER-127.

American dairy farmers' interest in Canadian dairy policy flows from bilateral trade in dairy products, U.S. exports of livestock feed to Canada, and Canada's role in international trade in dairy products. This study describes and analyzes Canadian dairy policy.

Getting Started in Farming. Economic Research Service. ERS Leaflet 564.

A start in farming, whether full or part time, whether as a retirement occupation or as a life's work, is an expensive proposition. Uncertainties face any farmer, of course, but the first year of farming may be critical to the farmer's future. This leaflet explains generally what will be needed in the way of money, and what the beginning farmer can do to cut some of his risks.

Addresses of State experiment stations:

This ready reference list for readers wishing to order publications and source material published through State experiment stations will be updated again in July 1977.

STATE	CITY	ZIP CODE
ALABAMA	Auburn	36830
ALASKA	University of Alaska	99701
ARIZONA	Tucson	85721
ARKANSAS	Fayetteville	72701
CALIFORNIA	Berkeley	94720
	Davis	95617
	Parlier	93648
	Riverside	92502
COLORADO	Fort Collins	80523
CONNECTICUT	New Haven	06504
	Storrs	06268
DELAWARE	Newark	19711
FLORIDA	Gainesville	32611
GEORGIA	Athens	30602
	Experiment	30212
	Tifton	31794
GUAM	Agana	96910
HAWAII	Honolulu	96822
IDAHO	Moscow	83843
ILLINOIS	Urbana	61801
INDIANA	West Lafayette	47907
IOWA	Ames	50011
KANSAS	Manhattan	66506
KENTUCKY	Lexington	40506
LOUISIANA	Baton Rouge	70803
MAINE	Orono	04473
MARYLAND	College Park	20742
MASSACHUSETTS	Amherst	01002
MICHIGAN	East Lansing	48823
MINNESOTA	St. Paul	55101
MISSISSIPPI	State College	39762
MISSOURI	Columbia	65201
MONTANA	Bozeman	59715
NEBRASKA	Lincoln	68503
NEVADA	Reno	89507
NEW HAMPSHIRE	Durham	03824
NEW JERSEY	New Brunswick	08903
NEW MEXICO	Las Cruces	88003
NEW YORK	Ithaca	14850
	Geneva	14456
NORTH CAROLINA	Raleigh	27607
NORTH DAKOTA	Fargo	58102
OHIO	Columbus	43210
	Wooster	44691
OKLAHOMA	Stillwater	74074
OREGON	Corvallis	97331
PENNSYLVANIA	University Park	16802
PUERTO RICO	Rio Piedras	00928
RHODE ISLAND	Kingston	02881
SOUTH CAROLINA	Clemson	29631
SOUTH DAKOTA	Brookings	57006
TENNESSEE	Knoxville	37901
TEXAS	College Station	77843
UTAH	Logan	84322
VERMONT	Burlington	05401
VIRGINIA	Blacksburg	24061
VIRGIN ISLANDS	St. Croix	00850
WASHINGTON	Pullman	99163
WEST VIRGINIA	Morgantown	26506
WISCONSIN	Madison	53706
WYOMING	Laramie	82071

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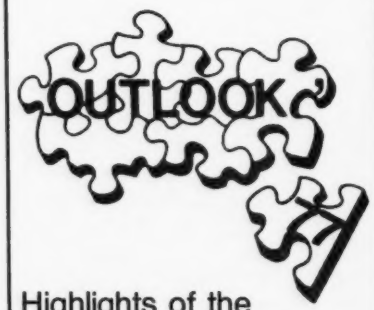

Highlights of the National Agricultural Outlook Conference

January 1977 Farm Index

Economic Trends

[1]Ratio of index of prices received by farmers to index of prices paid, interest, taxes, and farm wage rates. [2]Average annual quantities of farm food products purchased by urban wage earner and clericalworker households (including those of single workers living alone) in 1959-61—estimated monthly. [3]Annual and quarterly data are on 50-State basis. [4]Annual rates seasonally adjusted third quarter. [5]Seasonally adjusted. [6]As of March 1, 1967. [7]As of March 1, 1975. [8]As of February 1, 1976. [9]Beginning January 1972 data not strictly comparable with prior data because of adjustment to 1970 Census data.

Source: U.S. Dept. of Agriculture (Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Dept. of Commerce (Current Industrial Reports, Business News Reports, Monthly Retail Trade Report and Survey of Current Business); and U.S. Dept. of Labor (The Labor Force and Wholesale and Consumer Price Index).

Item	Unit or Base Period	1967	1975 Year	1975 Sept.	1976 July	1976 Aug.	1976 Sept.
Prices:							
Prices received by farmers	1967=100	—	186	199	195	187	186
Crops	1967=100	—	201	210	215	201	204
Livestock and products	1967=100	—	172	189	179	175	172
Prices paid, interest, taxes and wage rates	1967=100	—	181	186	196	195	195
Family living items	1967=100	—	166	169	177	177	178
Production items	1967=100	—	182	189	199	198	197
Ratio[1]	1967=100	—	102	107	99	96	95
Wholesale prices, all commodities	1967=100	—	174.9	177.7	184.3	183.7	184.7
Industrial commodities	1967=100	—	171.5	173.1	182.6	183.6	184.7
Farm products	1967=100	—	186.7	197.1	196.9	189.3	191.8
Processed foods and feeds	1967=100	—	182.6	186.1	182.6	176.8	177.1
Consumer price index, all items	1967=100	—	161.2	163.6	171.1	171.9	—
Food	1967=100	—	175.4	177.8	182.1	182.4	—
Farm Food Market Basket: [2]							
Retail cost	1967=100	—	173.6	176.4	176.8	176.5	174.9
Farm value	1967=100	—	187.0	202.8	183.0	189.5	175.1
Farm-retail spread	1967=100	—	165.3	159.7	172.8	175.2	174.6
Farmers' share of retail cost	Percent	—	42	45	40	39	39
Farm Income: [3]							
Volume of farm marketings	1967=100	—	115	131	116	119	137
Cash receipts from farm marketings	Million dollars	42,817	89,563	8,919	7,839	7,593	8,700
Crops	Million dollars	18,434	46,661	4,865	4,030	3,739	4,500
Livestock and products	Million dollars	24,383	42,902	4,054	3,809	3,854	4,200
Realized gross income [4]	Billion dollars	49.9	98.2	105.2	—	—	104.8
Farm production expenses [4]	Billion dollars	38.2	75.5	76.8	—	—	81.2
Realized net income [4]	Billion dollars	11.7	22.7	28.4	—	—	23.6
Agricultural Trade:							
Agricultural exports	Million dollars	6,380	21,894	1,609	1,799	1,760	1,797
Agricultural imports	Million dollars	4,452	9,328	945	958	932	914
Land Values:							
Average value per acre	Dollars	[6]168	[7]354	—	—	—	[8]403
Total value of farm real estate	Billion dollars	[6]181.9	[7]370	—	—	—	[8]421
Gross National Product: [4]	Billion dollars	796.3	1,516.3	1,548.7	—	—	1,709.7
Consumption	Billion dollars	490.4	973.2	987.3	—	—	1,012.0
Investment	Billion dollars	120.8	183.7	196.7	—	—	201.4
Government expenditures	Billion dollars	180.2	339.0	343.2	—	—	353.8
Net exports	Billion dollars	4.9	20.5	21.4	—	—	21.0
Income and Spending: [5]							
Personal income, annual rate	Billion dollars	626.6	1,249.7	1,277.1	1,383.4	1,389.5	—
Total retail sales, monthly rate	Million dollars	26,151	48,702	49,644	53,754	54,528	54,593
Retail sales of food group, monthly rate	Million dollars	5,759	10,977	11,137	11,614	11,747	11,884
Employment and Wages: [5]							
Total civilian employment	Millions	74.4	[9]84.8	[9]85.2	[9]87.9	[9]88.1	[9]87.8
Agricultural	Millions	3.8	[9]3.4	[9]3.5	[9]3.3	[9]3.4	[9]3.3
Rate of unemployment	Percent	3.8	8.5	8.6	7.8	7.9	7.8
Workweek in manufacturing	Hours	40.6	39.4	39.8	40.2	39.9	39.6
Hourly earnings in manufacturing, unadjusted	Dollars	2.83	4.81	4.89	5.20	5.20	5.30
Industrial Production: [5]	1967=100	—	117.8	122.1	130.7	131.4	—
Manufacturers' Shipments and Inventories: [5]							
Total shipments, monthly rate	Million dollars	46,449	82,724	86,200	93,912	94,483	—
Total inventories, book value end of month	Million dollars	84,655	146,574	146,413	151,824	152,745	—
Total new orders, monthly rate	Million dollars	46,763	86,754	85,482	94,803	93,999	—

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